

A CONSPECTUS OF PENTATOMINI GENERA OF THE WESTERN
HEMISPHERE. PART I (HEMIPTERA: PENTATOMIDAE)

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Abstract.—The Pentatomini of the Western Hemisphere is divided into 3 sections. Keys are provided to separate these sections and the genera of one section, viz. those genera that have a median tubercle at the base of the abdominal venter and a metasternal production apposing this tubercle. Four new monotypic genera are diagnosed, each based on a new species: *Elanela hevera* Rolston, n. sp., *Glaucioides englemani* Thomas, n. sp., *Nocheta adda* Rolston n. sp. and *Vidada dollingi* Rolston n. sp. The genus *Phineus* Stål is removed from this group and placed in Discocephalinae.

There is no conspectus of Western Hemisphere genera of Pentatomini more recent than the work of Stål (1867). Stål's conspectus is now inadequate because of the many genera subsequently added to the tribe.

As a foundation for this conspectus we have previously provided keys and diagnoses for the Western Hemisphere families of pentatomoids, subfamilies of pentatomids and tribes of the nominate subfamily (Rolston and McDonald 1979).

The present work divides the Pentatomini into three sections, which separate rather clearly with the exception of sexually dimorphic species of the genus *Dendrocoris*, and provides a key to the genera of section 3. Genera of this section have on the third abdominal sternite (second visible) a median tubercle that is apposed by the posterior margin of the metasternum. The metasternum is produced ventrad, at least posteriorly, and often interlocks with the abdominal spine.

The genus *Bathycoelia*, most species of which are African, is included in this section since 2 species of the genus were described from specimens supposedly collected in South America (Jensen-Haarup 1931 and 1937). These specimens were examined and they do indeed belong in *Bathycoelia*. Although the presence of this genus in South America is not unthinkable, its existence there needs confirmation.

The genus *Phineus* Stål, which has customarily been placed among the genera of section 3, is transferred to Discocephalinae on the basis of rostral and trichobothrial characters (Rolston and McDonald 1979).

Key to Sections of Pentatomini

1. Abdominal venter bearing median tubercle or spine at base

2

- Base of abdominal venter smooth medially, not clearly produced
Section 1
- 2. Metasternum projecting ventrad (at least between metacoxae) with posterior margin in apposition to median tubercle on base of abdominal venter (Fig. 23)
Section 3
- Median tubercle or spine at base of abdominal venter free distally, not in apposition to posterior margin of metasternum (Fig. 24)
Section 2

Key to the Western Hemisphere Genera of Pentatomini

Key to Genera of Pentatomini, Section 3

1. At least hind femora with two rows of spines on inferior surface (Fig. 1); body depressed *Placocoris* Mayr
 - Inferior surface of femora unarmed; body normally convex 2
2. Rostrum lying in deep mesial groove extending almost or entirely length of abdominal venter *Bathycoelia* Amyot & Serville
 - Abdominal venter not grooved mesially or only shallowly so basally 3
3. Tarsi 2-segmented *Phalaecus* Stål
 - Tarsi 3-segmented 4
4. Superior surface of at least mesothoracic femora prolonged distally as small spine (Fig. 2) 5
 - Superior surface of femora unarmed distally 7
5. First rostral segment lying entirely between bucculae; ostiolar rugae reaching more than halfway from inner margin of ostioles to lateral margin of metapleura (Fig. 3) *Pallantia* Stål
 - First rostral segment projecting beyond bucculae; ostiolar rugae reaching less than halfway from inner margin of ostioles to lateral margin of metapleura (Fig. 4) 6
6. Juga surpassing tylus, acute apically; superior surface of tibiae sulcate *Arvelius* Spinola
 - Juga not surpassing tylus; superior surface of tibiae rounded except distally *Taurocerus* Amyot & Serville
7. Metasternum bifurcate anteriorly and extending onto swollen mesosternum (Fig. 5) 8
 - Metasternum usually entire anteriorly, occasionally with pair of carinae 10
8. Anterolateral margins of pronotum fimbriate; ostiolar rugae extending halfway from mesial margin of ostioles to lateral margin of metapleura *Neopharnus* Van Duzee
 - Anterolateral margins of pronotum entire; ostiolar rugae extending

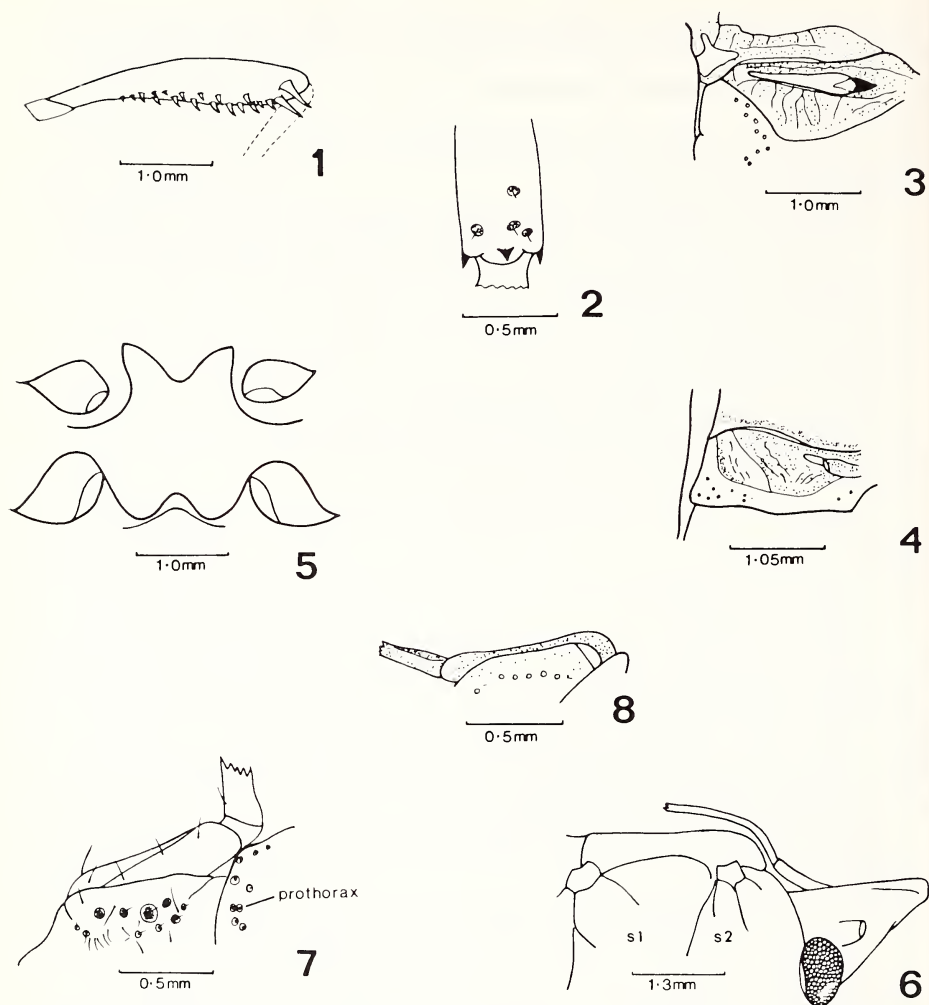
- about 3 fourths of distance from inner margin of ostioles to lateral margin of metapleura 9
9. Rostrum extending well beyond abdominal sternite bearing tubercle *Pharnus* Stål
 – Rostrum extending little or not at all past metacoxae *Praepharnus* Barber & Bruner
10. Mesosternal carina projecting cephalad between procoxae and beyond anterior limits of procoxae (Fig. 6) 11
 – Mesosternal carina if projecting cephalad terminating between procoxae 12
11. Apex of scutellum emarginate; ostiolar rugae nearly reaching lateral margin of metapleura *Evoplitus* Amyot & Serville
 – Apex of scutellum entire; ostiolar rugae extending about 2 thirds of distance from inner margin of ostiole to lateral margin of metapleura *Pseudevoplitus* Ruckes
12. Ostiolar rugae reaching more than halfway from inner margin of ostioles to lateral margin of metapleura 20
 – Ostiolar rugae reaching less than halfway from inner margin of ostioles to lateral margin of metapleura 13
13. Distal end of first rostral segment clearly projecting beyond bucculae (Figs. 7, 8) 14
 – Distal end of first rostral segment not or scarcely projecting beyond bucculae 18
14. Ratio of head width across eyes to length of head 10:8–10:10 15
 – Ratio of head width across eyes to length of head 10:7 or less 16
15. Humeral angles conspicuously produced; rostrum reaching mesocoxae *Myota* Spinola
 – Humeral angles little produced; rostrum reaching metacoxae *Vidada* Rolston, new genus
16. Metasternum saddle-shaped, transversely depressed between metacoxae and mesocoxae (in part) *Brachystethus* Laporte
 – Metasternal production nearly flat or obtusely carinate 17
17. Rostrum reaching mesocoxae; antennal segment 2 much shorter than 3 *Lopadusa* Stål
 – Rostrum reaching metacoxae; antennal segment 2 much longer than 3 *Elanela* Rolston, new genus
18. Metasternal production nearly flat *Serdia* Stål
 – Metasternal production sloping or arched 19
19. Metasternal production greatest posteriorly, sloping dorsad anteriorly, weakly carinate anteriorly *Marghita* Ruckes
 – Metasternal production longitudinally arched, carinate for entire length *Stictochilus* Bergroth

20. Distal end of first antennal segment clearly surpassing apex of head 21
 – Distal end of first antennal segment not or scarcely surpassing apex of head 24
21. Metasternum much more produced than mesosternum, often bulbous (Fig. 9) (in part) *Brachystethus* Laporte
 – Metasternal production flattened or obtusely carinate, together with abdominal spine and mesosternal carina forming nearly continuous profile (Fig. 10) 22
22. Metasternal production flattened; distal end of first rostral segment surpassing bucculae 23
 – Metasternal production obtusely carinate; distal end of first rostral segment not or scarcely surpassing bucculae *Paratibilis* Ruckes
23. Mesosternal carina forming thin wedge between procoxae, projecting slightly onto prosternum (Fig. 11) *Tibilis* Stål
 – Mesosternal carina little elevated, not projecting beyond mesosternum (in part) *Janeirona* Distant
24. Interocular distance more than twice width of one eye; juga well separated apically 25
 – Interocular distance less than twice width of one eye; juga contiguous or nearly so apically *Nocheta* Rolston, new genus
25. Distal end of first rostral segment clearly exceeding bucculae 26
 – First rostral segment lying entirely between bucculae 27
26. Apex of rostrum extending to or beyond posterior margin of third sternite; juga no longer than tylus *Pharypia* Stål
 – Apex of rostrum not projecting beyond metacoxae; juga surpassing tylus (in part) *Janeirona* Distant
27. Posterior margin of metasternum excavated medially and apex of abdominal spine fitting into this excavation (Fig. 14) *Glaucioides* Thomas, new genus
 – Posterior margin entire medially or with shallow subvertical sulcus *Banasa* Stål

Elanela Rolston, new genus

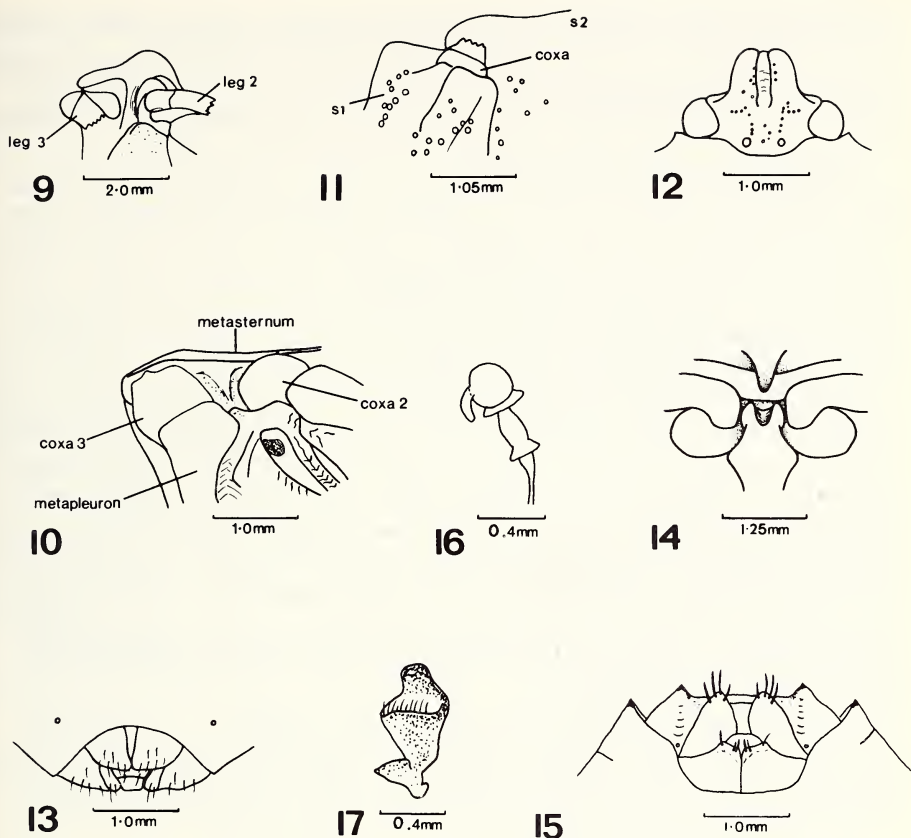
Type species.—*Elanela hevera* Rolston, n. sp.

Diagnosis.—Median tubercle of abdominal sternite 3 (second visible) fitting into notch in posterior margin of metasternum. Metasternum produced, flat and bifurcate posteriorly, becoming obtusely carinate anteriorly. Mesosternum obtusely carinate mesially, forming continuous profile along meson with metasternum, anteriorly apposing two low carinae on prosternum which diverge and continue as anterior prosternal margin. Ostiolar ruga on



Figs. 1-8. 1. *Placocoris viridis*—right hind femur. 2, 3. *Pallantia macula*—2. Left mid femur, apex. 3. Right metathoracic scent gland. 4. *Arvelius latus*—right metathoracic scent gland. 5. *Pharnus inconspicuus*—metasternum. 6. *Pseudevoplilus longicornis*—mesosternal carina, lateral. 7. *Lopadusa augur*—right buccula, lateral. 8. *Elanela hevera*—left buccula, lateral. (S1, S2), sternites one, two.

each metapleuron extending between 1 fourth and 1 half of distance from mesial margin of ostiole to lateral margin of metapleuron. Femora unarmed; tibiae sulcate; tarsi 3-segmented. Bucculae posteriorly curving to surface of head. Basal segment of rostrum projecting past bucculae (Fig. 8); apex of rostrum reaching metacoxae. Length of head about 6 tenths of width across eyes. Juga and tylus subequal in length; lateral margins of juga deeply con-



Figs. 9-17. 9. *Brachystethus rubromaculatus*—meso-, metasterna, lateral. 10. *Janeirona bergi*—meso-, metasterna, lateral. 11. *Tibilis parva*—pro-, mesosterna, lateral. 12. *Elanela hevera*—head, dorsal. 13. *Elanela hevera*—female genitalia. 14-17. *Glaucioides englemani*. 14. Metasternum, ventral. 15. Female genitalia. 16. Spermatheca. 17. Left paramere. (S1, S2), sternites one, two.

cave before eyes (Fig. 12). Basal segment of antennae stout, reaching to or slightly beyond apex of head.

Elanela hevera Rolston, n. sp.

Stramineous with castaneous to black punctures and markings. Length 7.5 mm, width at humeri 4.5 mm.

Head sparsely punctate excepting line of contiguous punctures on each side touching ocellus mesially and curving anteriorly then laterally toward middle of eye. Lateral margin of juga parallel between anterior convexity and concavity before eyes, narrowly bordered in brown. Width of head

across eyes 1.9 mm, length 1.2 mm; interocular width about 1.05 mm; width across ocelli about 0.65 mm. Antennal segments 0.4, 1.0, 0.8, 1.5, 1.7 mm long; distal half of segments 4 and 5 black. Rostral segments 2 through 4 about 1.0, 0.7, 0.5 mm long; distal end of segment 2 at middle of mesosternum, of segment 3 at mesocoxae, of segment 4 at metacoxae.

Pronotal punctures arranged in line on anterior and anterolateral submargins, along posterior boundary of cicatrices and posterior boundary of narrow transverse callus lying immediately caudad of cicatrices; much smaller punctures border posterior pronotal margin; a few small punctures interspersed with many larger punctures scattered over pronotal disk. Anterolateral margins straight, narrowly ridged at edge. Humeri not produced. Pronotal width at humeri 4.4 mm, length at meson 1.7 mm.

Scutellar punctations sparse on basal disk, dense elsewhere excepting impunctate apex; large stramineous callus present in each basal angle; fovea small, inconspicuous; basal width and length each 3.0 mm. Large stramineous spot on disk of each corium located in an elongate impunctate area; punctation elsewhere similar in density and strength to that on lateral portions of scutellum. Connexivum broadly exposed, black to castaneous with 2 pale macules on each segment, one arching mesad from lateral margin, one arching cephalad from posterior margin, these much reduced on first visible segment, confluent on last segment; dark areas densely punctate, light areas nearly impunctate.

Venter sparsely irregularly punctate, most strongly so on propleura. Evaporative area matte, minutely granular, without fine rugae, castaneous. Spiracles on sternite 2 exposed; peritremes dark. Posterolateral angles of sternites (except second) produced as small black spines.

Genital plates as in Figure 13.

Holotype.—Female, labeled (a) "Peru: Iquitos, 100 mi. n.e., on Napo R." (b) "Mar. 20, 1969. B. K. Dozier." Deposited in Florida State Collection of Arthropods (Gainesville, Florida). No paratypes.

Glaucioides Thomas, new genus

Type species.—*Glaucioides englemanni* Thomas, n. sp.

Diagnosis.—Abdominal sternite 3 (second visible) bearing anteriorly directed spinose tubercle, this tubercle received by elongated socket on posterior surface of metasternum. Socket slanting anteroventrad, closed ventrally (open in related genera) (Fig. 14). Metasternum pubescent, mildly convex, elevated posteriorly, sloping and subelevated anteriorly. Low flat mesial carina on mesosternum broadened anteriorly, obsolescent on posterior $\frac{1}{4}$.

Apex of scutellum angulate, not bluntly rounded as in related genera.

Ostiolar rugae sinuate, elongate, extending nearly to the edge of metapleura. Femora unarmed; tibia terete; tarsi 3-segmented.

Basal segment of rostrum lying entirely within bucculae, latter evanescent posteriorly. Jugae and tylus subequal in length. Basal segment of antennae not surpassing apex of head.

Etymology.—Named to reflect morphological similarity to the Indo-Malaysian genus *Glaucias* Kirkaldy 1908.

Glaucoides englemani Thomas, n. sp.

Stramineous, devoid of darkened punctures; abdominal tergites and sometimes jugae, pronotum and connexivum thinly margined with red; acuminate tips of connexival angles black. Weak punctures densest on pronotum and apical $\frac{1}{3}$ of scutellum; head without or only feebly punctate; dorsal surface strigose at bases of jugae.

Head width across the eyes 2.1 mm, length 2.2 mm; interocular width 1.3 mm. Antennal segments: 0.51, 0.75, 1.25, 1.50, 1.51 mm long; distal $\frac{1}{2}$ of segments 3 and 5, and nearly all of segment 4 dark brown. Rostral segments 2 through 4: 1.1, 1.0, 0.8 mm long, tip of rostrum just attaining abdominal tubercle.

Anterolateral pronotal margins straight, obtuse; humeri not produced; cicatrices inconspicuous. Pronotal width 5.6 mm, length at meson 2.5 mm.

Basal disk of scutellum mildly convex and more sparsely punctate than apex. Apex of scutellum angulate, pointed; length 4.0 mm. Hemelytra with weak, dense punctures, nearly translucent; membrane hyaline.

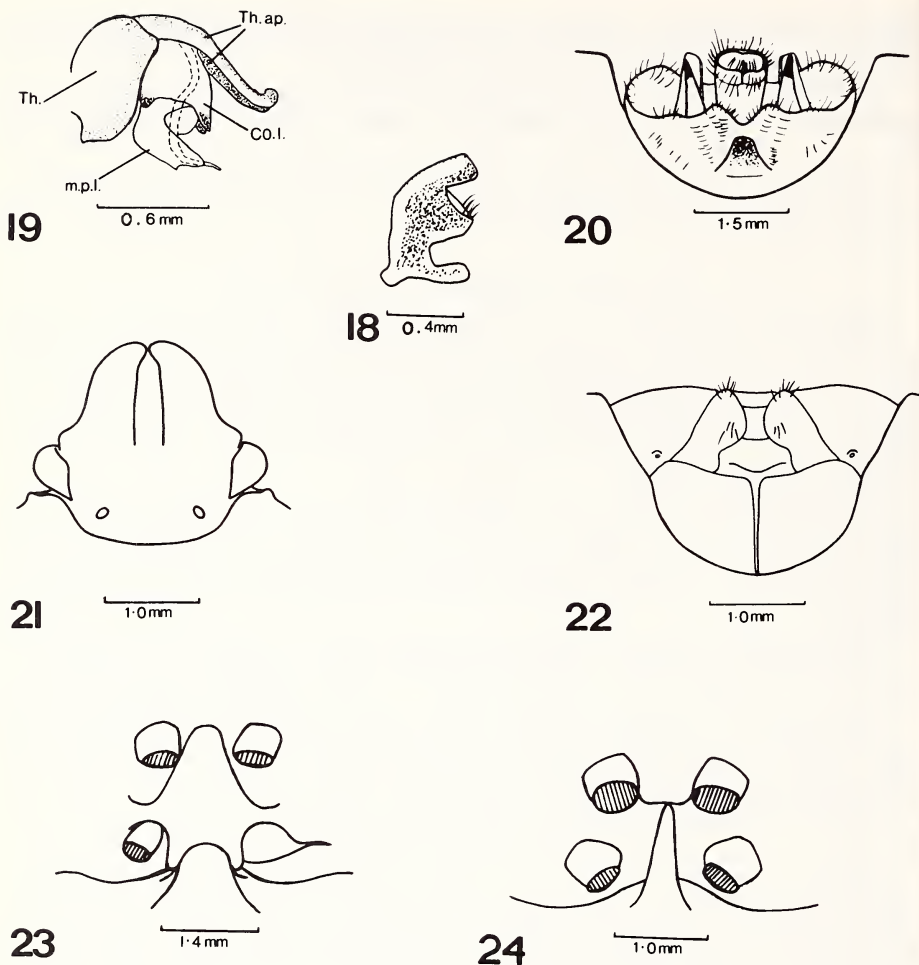
Venter of abdomen broadly V-shaped in cross section, sloping sides flat, impunctate. Peritremes of spiracles concolorous with venter.

Tergite 6 of female bearing a pair of triangulate, posteriorly directed teeth (Fig. 15). Spermathecal bulb with a lateral process (Fig. 16). Pygophore of male open, ventral border broadly V-shaped from caudal view; inferior margin broadly, shallowly emarginate, subtended by a broad, shallow sulcus which becomes obsolescent laterally. Pygophore otherwise unelaborated. Proctiger broad, dorsal aspect trapezoidal, with a shallow, transverse, mesial depression. Parameres squat, goblet shaped, with a broad spatulate apophysis extending from rim of its bowl (Figs. 17, 18). Aedeagus with a pair of elongate thecal processes (Fig. 19).

Length.—♂ 10.1 mm, ♀ 11.3 mm. Width: ♂ 5.6 mm, ♀ 6.3 mm.

Etymology.—This species is named for H. Dodge Engleman, M.D., of Coco Solo, Panama, who has presented us with numerous specimens of Pentatomidae for study, including one of the types upon which this species is based.

Holotype.—♂ Sinop, Brazil, (Mato Grosso): Lat. 12°31', Long. 55°37'.



Figs. 18–24. 18, 19. *Glaucioides englemani*. 18. Left paramere, lateral. 19. Aedeagus. 20. *Nocheta adda*—genital cup. Figs. 21, 22. *Vidada dollingi*. 21. Head, dorsal. 22. Female genitalia. 23. *Serdia concolor*—metasternum. 24. *Ramosiana insignis*—metasternum. (Co. l.), conjunctival lobe, (m.p. l.), median penial lobe, (Th.), theca, (Th. ap.), thecal appendage.

Oct. 1974. M. Alvarenga Collr. Deposited in the American Museum of Natural History.

Paratypes.—3♂♂ same locality, date and collr; 1♂ same locality and collr., Oct. 1975; 1♂ Barro Colorado Island, Panama, 5 May 1937, S. W. Frost collr; 1♀ Barro Colorado Island, Panama, 1–9 May 1964, W. D. and S. S. Duckworth collrs; 1♂ Barro Colorado Islan, Panama, 1 May 1973, D. Engleman collr; 1♀ Mepane Kamp, Surinam, Aug. 1961, J. P. Shulz

collr; 1♀ Mt. Duida, Venezuela, 25 Feb. 1924, unk. collr; 1♀ Kuyuwini River, British Guiana, 22 Nov. 1937, W. G. Hassler collr. Deposited in the collections of the American Museum of Natural History, U.S. National Museum, California Academy of Sciences and the authors.

Nocheta Rolston, new genus

Type species.—*Nocheta adda* Rolston, n. sp.

Diagnosis.—Median tubercle on abdominal sternite 3 (second visible) fitting into notch in posterior margin of metasternum. Metasternum produced, surface flat with lateral ramus on each side between meso- and metacoxae, apposed anteriorly by mesosternal carina. Mesosternum tumescent; mesial carina broad basally and continuing profile of metasternum when viewed laterally, narrowing anteriorly to acuminate termination between procoxae. Arms of chevron shaped production on prosternum diverging cephalad of procoxae, continuing along anterior submargin of proplura, terminating behind eyes. Ostiolar sulcus and ruga on each side reaching about 8 tenths of distance from mesial margin of ostiole to lateral margin of metapleuron. Femora unarmed; tibiae sulcate; tarsi 3-segmented. Bucculae evanescent posteriorly. First rostral segment lying entirely between bucculae. Juga convergent before tylus; lateral margin of juga deeply concave before eyes. Basal segment of antennae scarcely projecting past apex of head.

Nocheta adda Rolston, n. sp.

Stramineous with dark castaneous to black punctation and markings. Length about 9.1 mm, width at humeri 5.2 mm.

Line of dense punctation along both margins of tylus continuing over vertex, converging at base of head; mesial margin and longitudinal band on disk of juga densely punctate; punctures about eye irregularly disposed. Lateral jugal margins sigmoid, nowhere parallel, narrowly bordered in black. Width of head across eyes 2.5 mm, length 1.5 mm; interocular distance 1.2 mm; distance across ocelli about 0.85 mm. Ocelli rather larger, about 0.2 mm in diameter. Antennal segments 0.5, 1.5, 1.6, 2.2, 2.1 mm long; color stramineous to fulvous, first 3 segments darkly dotted, third faintly so, fifth fuscous on distal half. Rostral segments 2 through 4 about 0.8, 0.9, 0.5 mm long; segment 2 reaching procoxae; apex of segment 4 nearly attaining mesocoxae.

Narrow pale callus traversing pronotum along posterior margins of cicatrices. Row of closely spaced punctures surrounding cicatrices, a few punctures scattered on cicatrices. Anterolateral margins straight with single row of punctures between narrowly reflexed margin and submarginal impunctate band. Punctation elsewhere on pronotum mostly in transverse lines, these

longer and somewhat vermiform basally. Humeri not produced. Pronotal width 5.2 mm, length at meson 2.2 mm.

Scutellar punctations in transverse vermiform castaneous bands; basal angles without callus or fovea; width at base 3.5 mm, length 4.0 mm; frena extending along basal 6 tenths; apex acute. Coria blotched with castaneous; punctation stronger than on scutellum; membrane fumose with about a dozen simple veins. Connexiva moderately exposed, alternately banded where exposed with dark border on each side of intersegmental sutures.

Venter sparsely and weakly punctate excepting moderately dense punctation on propleura. Evaporative areas matte, not rugulose, concolorous with remainder of meso- and metapleura. Spiracular peritremes concolorous with surrounding area of sternites.

Posterior surface of pygophore with deep mesial triangular impression below emargination of dorsal border; subacute tooth present on each side of emargination. Parameres acicular, partially obscuring subvertical ridge on anterior wall of genital cup (Fig. 20).

Holotype.—Male labeled (a) "Hyutanahan Rio Purus Brazil. S. M. Klages." (b) "March 1922." Deposited in U.S. National Museum. Type no. 72138. No paratypes.

Vidada Rolston, new genus

Type species.—*Vidada dollingi* Rolston, n. sp.

Diagnosis.—Metasternal production almost flat, posterior margin lightly notched mesially, anterior margin truncate and slightly less produced than adjacent part of mesosternum. Mesosternal carina broad, flattened between mesocoxae and procoxae, compressed between procoxae, not extending onto prosternum. Prosternum tumescent with low carina on each side curving anterolaterad from between procoxae. Ostiolar ruga on each metapleuron extending about 3 tenths of distance from mesial margin of ostiole to lateral margin of metapleuron. Femora unarmed; tibiae sulcate; tarsi 3-segmented. Bucculae sloping caudad to surface of head. Basal segment of rostrum projecting beyond bucculae; apex of rostrum reaching mesial tubercle on abdominal venter. Length of head about 8.5 tenths of width across eyes. Juga contiguous before tylus, their lateral margins moderately concave before small obtuse anteocular process (Fig. 21). Basal segment of antennae projecting little beyond apex of head.

Vidada dollingi Rolston, n. sp.

Dorsum castaneous becoming fuscous on pronotum anteriorly and disk of head; venter dark castaneous; appendages light castaneous excepting antennal segment 3 distally and 4 fuscous. Length about 12.3 mm, width across humeri 5.9 mm.

Head flat above, jugal margins reflexed; punctation dense, somewhat rugose. Eyes appearing small relative to head width; width of head across eyes 2.35 mm, length 1.9 mm; interocular width 1.5 mm; distance across ocelli 1.1 mm. Length of antennal segments 0.8, 0.5, 1.1, 1.4 mm (last missing). Rostral segments 2 through 4 about 1.6, 1.5, 1.0 mm long.

Anterolateral margins of pronotum reflexed, slightly sinuous. Punctation dense, all of disk behind cicatrices somewhat rugose. Width at humeri 5.9 mm, length at meson 2.6 mm.

Scutellum less densely punctate but basally more rugose than pronotum; fovea in basal angles deep; basal width 3.6 mm, length 4.7 mm; frena extending along basal 6 tenths of scutellum. Coria punctate similarly to pronotum, immaculate; membrane darkly fumose with about 7 weak simple veins. Connexiva almost unicolorous, modestly exposed.

Thoracic venter strongly and densely punctate; abdominal venter weakly but densely punctate laterally, becoming almost impunctate mesially. Evaporative area strongly rugose, punctate. Spiracles small, oval, with black peritreme.

Genital plates as in Figure 22; surface of 9th paratergite convex, strongly so basally.

Holotype.—Female, labeled (a) "Machu-Picchu, Cuzco. 8-V-65" (b) "arbusto" (c) "1067" (d) "CUZCO." Deposited in Museu Nacional, Rio de Janeiro, Brazil.

No paratypes.

Comments.—This species is dedicated to W. R. Dolling, of the British Museum (Natural History), whose unstinting assistance to fellow hemipterists is indispensable.

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